

10/543174  
JC17 Rec'd PCT/PTO 22 JUL 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-15 (canceled).

Claim 16 (new): A method for supplying a dialyser of a dialysis unit with a dialysing fluid, the method comprising:

making available at least one dialysing fluid concentrate in at least one receiving unit;  
making available water for diluting the at least one dialysing fluid concentrate;  
mixing the at least one dialysing fluid concentrate and the water in a first pre-set volumetric ratio to prepare the dialysing fluid; and

supplying the dialysing fluid to the dialyser of the dialysis unit at a pre-set dialysing fluid flow rate  $Q_{d_b}$  over a pre-set treatment time  $T_B$ ;

wherein the pre-set dialysing fluid flow rate  $Q_{d_b}$  is set at a value which depends upon the presence of a pre-set volume of the at least one dialysing fluid concentrate at a commencement of a dialysis treatment, the first pre-set volumetric ratio, and the pre-set treatment time  $T_B$  during the dialysis treatment, such that at the end of the dialysis treatment the at least one receiving unit is either empty or contains a pre-set residual volume of the at least one dialysing fluid concentrate.

Claim 17 (new): The method of claim 16, further comprising:

determining the pre-set dialysing fluid flow rate  $Q_{d_b}$  before the commencement of the dialysis treatment from the pre-set volume of the at least one dialysing fluid concentrate at

the commencement of the dialysis treatment, the first pre-set volumetric ratio, and the pre-set treatment time  $T_B$  during the dialysis treatment;

wherein at the end of the pre-set treatment time  $T_B$  the at least one receiving unit is either empty or contains the pre-set residual volume of the at least one dialysing fluid concentrate.

Claim 18 (new): The method of claim 16, further comprising:

testing the dialysis unit before the commencement of the dialysis treatment, the testing comprising determining a volume of the at least one dialysing fluid concentrate in the at least one receiving unit before the commencement of the dialysis treatment over a pre-set time interval  $T_{test}$  from the pre-set volume of the at least one dialysing fluid concentrate at the commencement of the dialysis treatment and a volume of the at least one dialysing fluid concentrate used during the pre-set time interval  $T_{test}$ .

Claim 19 (new): The method of claim 16, further comprising:

determining a pre-set dialysing fluid flow rate  $Q_{d_{b1}}$  over a pre-set time interval of the dialysis treatment  $T_{B1}$  such that an amount of the at least one dialysing fluid concentrate remaining in the at least one receiving unit at the end of the pre-set time interval of the dialysis treatment  $T_{B1}$  can be calculated from the pre-set volume of the at least one dialysing fluid concentrate at the commencement of the dialysis treatment and an amount of the at least one dialysing fluid concentrate used up during the dialysis treatment; and

determining a dialysing fluid flow rate  $Q_{d_v}$  from a volume of the at least one dialysing fluid concentrate in the at least one receiving unit at the end of the pre-set time interval of the dialysis treatment  $T_{B1}$ , the first pre-set volumetric ratio, and a remaining dialysis treatment time, wherein the dialysing fluid flow rate  $Q_{d_v}$  is the flow rate required to

be set for the remaining dialysis treatment time in order to ensure that at the end of the dialysis treatment the at least one receiving unit is either empty or contains the pre-set residual volume of the at least one dialysing fluid concentrate.

Claim 20 (new): The method of claim 17, wherein at the end of the pre-set treatment time  $T_B$  the at least one receiving unit contains the pre-set residual volume of the at least one dialysing fluid concentrate, the method further comprising:

discharging the pre-set residual volume of the at least one dialysing fluid concentrate to waste.

Claim 21 (new): The method of claim 20, further comprising:

diluting the pre-set residual volume of the at least one dialysing fluid concentrate with water in a second pre-set volumetric ratio before the pre-set residual volume is discharged to waste.

Claim 22 (new): The method of claim 17, wherein at the end of the pre-set treatment time  $T_B$  the at least one receiving unit is empty.

Claim 23 (new): An apparatus for supplying a dialyser of a dialysis unit with a dialysing fluid, the apparatus comprising:

at least one receiving unit for at least one dialysing fluid concentrate;

means for providing the availability of water for a dilution of the at least one dialysing fluid concentrate;

means for mixing the at least one dialysing fluid concentrate and the water in a first pre-set volumetric ratio to prepare the dialysing fluid;

means for conducting the dialysing fluid to the dialyser of the dialysis unit at a pre-set dialysing fluid flow rate over a pre-set treatment period; and

a control and calculating unit which is designed such that a dialysing fluid flow rate  $Q_d$  can be adjusted during a dialysis treatment such that at the end of the dialysis treatment the at least one receiving unit is either empty or contains a pre-set residual volume of the at least one dialysing fluid concentrate;

wherein the dialysing fluid flow rate  $Q_d$  is dependent upon a pre-set volume of the at least one dialysing fluid concentrate at a commencement of a dialysis treatment, the first pre-set volumetric ratio, and the pre-set treatment period.

Claim 24 (new): The apparatus of claim 23, wherein the control and calculating unit is designed such that a dialysing fluid flow rate  $Q_{db}$  is determined before the commencement of the dialysis treatment from the pre-set volume of the at least one dialysing fluid concentrate at the commencement of the dialysis treatment, the first pre-set volumetric ratio, and the pre-set treatment period, wherein the dialysing fluid flow rate  $Q_{db}$  is capable of adjustment over the pre-set treatment period such that at the end of the dialysis treatment the at least one receiving unit is either empty or contains the pre-set residual volume of the at least one dialysing fluid concentrate.

Claim 25 (new): The apparatus of claim 23, wherein the control and calculating unit is designed such that, for the purposes of a test of the apparatus lasting a pre-set time interval  $T_{test}$  before the commencement of the dialysis treatment, a volume of the at least one dialysing fluid concentrate in the at least one receiving unit can be determined from the pre-set volume of the at least one dialysing fluid concentrate at the commencement of the dialysis

treatment and a volume of the at least one dialysing fluid concentrate used during the pre-set time interval  $T_{\text{test}}$ .

Claim 26 (new): The apparatus of claim 23, wherein the control and calculating unit operates in association with the means for mixing such that during a pre-set time interval of the dialysing treatment  $T_{B1}$ , a pre-set dialysing fluid flow rate  $Q_{d_b}$  is set such that an amount of the at least one dialysing fluid concentrate remaining in the at least one receiving unit at the end of the pre-set time interval of the dialysis treatment  $T_{B1}$  can be determined from the pre-set volume of the at least one dialysing fluid concentrate at the commencement of the dialysis treatment and an amount of the at least one dialysing fluid concentrate used up during the dialysis treatment, and such that at the end of the pre-set time interval of the dialysis treatment  $T_{B1}$ , a dialysing fluid flow rate  $Q_{d_v}$  is determined from a volume of the at least one dialysing fluid concentrate in the at least one receiving unit at the end of the pre-set time interval of the dialysis treatment  $T_{B1}$ , the first pre-set volumetric ratio, and a remaining dialysis treatment time, wherein the dialysing fluid flow rate  $Q_{d_v}$  is the flow rate required to be set for the remaining dialysis treatment time in order to ensure that at the end of the dialysis treatment the at least one receiving unit is either empty or contains the pre-set residual volume of the at least one dialysing fluid concentrate.

Claim 27 (new): The apparatus of claim 24, further comprising:

means for discharging the pre-set residual volume of the at least one dialysing fluid concentrate to waste via a waste discharge outlet;

wherein at the end of the pre-set treatment period the at least one receiving unit contains the pre-set residual volume of the at least one dialysing fluid concentrate, and wherein the control and calculating unit operates in association with the means for

discharging such that at the end of the pre-set treatment period, the pre-set residual volume is capable of being discharged to the waste discharge outlet.

Claim 28 (new): The apparatus of claim 27, further comprising:

means for mixing the pre-set residual volume of the at least one dialysing fluid concentrate with water in a second pre-set volumetric ratio;

wherein the control and calculating unit operates in association with the means for mixing the pre-set residual volume of the at least one dialysing fluid concentrate with water such that the pre-set residual volume is capable of being diluted with water before the pre-set residual volume is discharged to the waste discharge outlet.

Claim 29 (new): The apparatus of claim 24, wherein at the end of the pre-set treatment period the at least one receiving unit is empty.

Claim 30 (new): The apparatus of claim 23, further comprising:

means for inputting data relevant to the pre-set volume of the at least one dialysing fluid concentrate at the commencement of a dialysis treatment, the first pre-set volumetric ratio, and the pre-set treatment period.